REMARKS

This Reply is believed to be fully responsive to the Office Action mailed on October 13, 2006. By the present amendments claim 235 has been rewritten to define the hybridization conditions, to delete the clause embracing the use of T1R2 fragments, to define the precise stringent hybridization conditions, and to recite that the T1R2 polypeptides used in the claimed assays bind a ligand also specifically bound by the native human T1R2 polypeptide contained in SEQ ID NO:21. As the subject specification teaches the role of T1R2 in sweet transduction and that it responds to sweet ligands, the claim as amended finds adequate written description support in the as-filed specification.

Claims 235-286 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject mater which applicant regards as the invention.

Specifically, the Examiner questioned the intent of "putatively" modulate or elicits human T1R2-associated taste. Applicants respectfully submit that this merely is intended to convey the fact that while a compound which is demonstrated to affect or elicit T1R2 activity in vitro in the claimed assays most likely would modulate taste in vivo (as do the sweet ligands shown in functional or binding assays to modulate T1R2). However, while this is a reasonable likelihood, for any given ligand this fact should be confirmed in an in vivo taste test as recited e.g., in dependent claims 284-286.

Claims 235 and 244 also are rejected for failing to define the precise hybridization conditions. This criticism is moot as the stringent hybridization conditions are now set forth in the only independent claim 235 from which claim 244 depends.

Accordingly, Applicants respectfully request that the rejection of claims 235-286 be withdrawn.

Claims 235 and 243 stand rejected as allegedly being broader than the enabling disclosure. This rejection is respectfully traversed to the extent it may be applicable to the claims as amended. At the outset it is noted with appreciation that claims 236-242 are not included in this rejection and therefore are enabled by the teachings of the as-filed specification.

Essentially, the position of the Examiner resides in the fact that the prior claims embraced the use of a widely divergent genus of T1R2 polypeptides which encompasses fragments of the subject human T1R2 polypeptide, sequences that are encoded by genes that hybridize to the subject T1R2 gene under undefined conditions with no recitation or means for selection of operative embodiments, i.e., those T1R2 variants which are involved in taste transduction and therefore can be used in the claimed assays.

It is believed that the 112 enablement rejection should be vacated in view of the present amendment of claim 235. Applicants respectfully note that the claims in order to expedite allowance no longer embrace the use of T1R2 polypeptide fragments. Additionally, the claims which are limited to the use of the wild-type T1R2 polypeptide, those which possess at least 90% sequence identity therewith, or sequences which are encoded by genes that hybridize thereto under defined stringent hybridization conditions further now require that this T1R2 variant specifically bind to a ligand that also specifically binds endogenous human T1R2.

As noted above, this application teaches the role of T1R2 in sweet taste transduction and that this receptor specifically responds to sweet ligands. Therefor it would be apparent to one

skilled in the art that a T1R2 variant which falls within the now narrower genus of potential T1R2 polypeptides must in a screening assay specifically bind to a ligand (e.g., sucrose, aspartame, or the like) which similarly binds to T1R2. This could be determined by routine screening based on the teachings of this application and would not rise to the level of "undue experimentation".

In fact, as shown by data presented in a related application (US Serial No. 09/799,629) being examined by the same Examiner, and as reported in a Proceedings of the Academy of Sciences publication authored by inventors or employees of the present Assignee Senomyx Inc., that T1R2 and T1R3 chimeras in functional studies which are modified to combine T1R domains from different T1Rs of the same or different species (rodent) and which possess on average less than about 80% sequence identity to the corresponding unmodified T1R polypeptide, when assayed in functional studies residues retain the ability to bind tastants (sweet or umami ligands). This further substantiates Applicants position that the scope of the current claims is reasonable as one skilled in the art would be able to practice the full scope of the claims absent undue experimentation.

Based on the foregoing the 112 enablement rejection should not be maintained.

Claims 235 and 243-286 further stand rejected as allegedly not satisfying the written description requirement of 35 USC 112 first paragraph. The basis of the rejection is substantially the same as the enablement rejection of the same claims. For the reasons articulated in the traversal of the 112 first paragraph enablement rejection, and in view of the amendment of claim 235 herein to define the precise hybridization conditions, to eliminate the recitation of T1R2

fragments, and to further require that the T1R2 polypeptide must specifically bind to a ligand that also specifically binds to the unmodified T1R2 polypeptide, it is respectfully submitted that the 112 written description rejection should not be maintained against any of the current claims. Withdrawal of this rejection is therefore respectfully requested.

It is anticipated that the present amendments and remarks will place the case in condition for allowance.

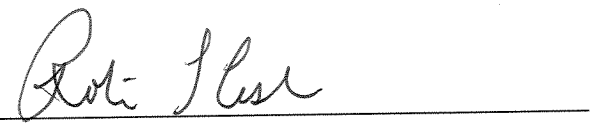
Based on the foregoing, a Notice to that effect is respectfully solicited. Reconsideration and allowance of all claims are respectfully requested. However, if any issues remain after consideration of this Amendment, Examiner Brannock is respectfully requested to contact the undersigned by telephone (202-419-2018) so that these issues can be resolved by Examiner's Amendment or a Supplemental Response.

Applicants believe that no fee is due with the filing of this Amendment. However, in the event that the calculations of the Office differ, Commissioner is hereby authorized to charge or credit any such variance or credit any overpayment to the undersigned's Deposit Account No. 50-0206.

Respectfully submitted,

HUNTON & WILLIAMS LLP

Date: **January 11, 2007**

By: 

Robin L. Teskin
Reg. No. 35,030

Hunton & Williams LLP
1900 K Street, N.W.
Suite 1200
Washington, D.C. 20006-1109
Phone: (202) 955-1500
Fax: (202) 778-2201